

WHAT IS CLAIMED IS:

- 1 1. A method of managing a shared resource, said method  
2 comprising:  
3 determining whether a process identifier included in a  
4 queue corresponds to a read requestor or a write  
5 requestor;  
6 allowing the write requestor to write to the shared  
7 resource in response to the process identifier  
8 corresponding to the write requestor; and  
9 allowing one or more successive read requestors to  
10 read from the shared resource in response to the  
11 process identifier corresponding to one of the  
12 read requestors.
- 1 2. The method as described in claim 1 further comprising:  
2 setting a resource lock in an available mode;  
3 setting the resource lock in a read mode in response  
4 to the first of the one or more read requestors  
5 accessing the available resource lock; and  
6 granting each of the read requestors read access to  
7 the resource lock.
- 1 3. The method as described in claim 1 further comprising:  
2 setting a write wanted flag in response to a write  
3 requestor requesting a resource lock after the  
4 resource lock has been set in read mode;  
5 requesting lock access by one or more read requestors,  
6 the requesting occurring after the write wanted  
7 flag is set;

8       granting lock access to a first group of the read  
9              requestors in response to the first group being  
10             included in the one or more successive read  
11             requestors; and

12      denying lock access to a second group of the read  
13              requestors in response to the second group not  
14             being included in the one or more successive read  
15             requestors.

1     4. The method as described in claim 3 further comprising:  
2             setting a woken up flag for each read requestor  
3             included in the first group.

1     5. The method as described in claim 1 further comprising:  
2             releasing a resource lock; and  
3             granting a requesting process ownership of the  
4             resource lock, wherein the requesting process is  
5             the first process to request the resource lock  
6             after the releasing.

1     6. The method as described in claim 5 wherein the  
2             requesting process does not correspond with any of the  
3             process identifiers included in the queue.

1     7. The method as described in claim 5 wherein the  
2             requesting process corresponds with one of the process  
3             identifiers included in the queue.

1     8. The method as described in claim 5 further comprising:  
2             speeding up processing for one or more read requestors  
3             that acquire the resource lock.

1 9. The method as described in claim 8 wherein the  
2 speeding up includes granting one or more read  
3 requestors a temporary time slice exemption.

1 10. The method as described in claim 1 further comprising:  
2 identifying an upgrader in the queue; and  
3 granting the upgrader a write lock to the shared  
4 resource.

1 11. The method as described in claim 10 further  
2 comprising:  
3 boosting a priority of the upgrader prior to the  
4 upgrader writing to the shared resource.

1 12. An information handling system comprising:  
2 one or more processors;  
3 a memory accessible by the processors;  
4 one or more shared resources;  
5 a nonvolatile storage device accessible by the  
6 processors; and  
7 a shared resource manager, the shared resource manager  
8 including:  
9 means for determining whether a process  
10 identifier included in a queue corresponds  
11 to a read requestor or a write requestor;  
12 means for allowing the write requestor to write  
13 to the shared resource in response to the  
14 process identifier corresponding to the  
15 write requestor; and  
16 means for allowing one or more successive read  
17 requestors to read from the shared resource

18                   in response to the process identifier  
19                   corresponding to one of the read requestors.

1 13. The information handling system as described in claim  
2 12 further comprising:

3       means for setting a resource lock in an available  
4       mode;

5       means for setting the resource lock in a read mode in  
6       response to the first of the one or more read  
7       requestors accessing the available resource lock;  
8       and

9       means for granting each of the read requestors read  
10      access to the resource lock.

1 14. The information handling system as described in claim  
2 12 further comprising:

3       means for setting a write wanted flag in response to a  
4       write requestor requesting a resource lock after  
5       the resource lock has been set in read mode;

6       means for requesting lock access by one or more read  
7       requestors, the requesting occurring after the  
8       write wanted flag is set;

9       means for granting lock access to a first group of the  
10      read requestors in response to the first group  
11      being included in the one or more successive read  
12      requestors; and

13      means for denying lock access to a second group of the  
14      read requestors in response to the second group  
15      not being included in the one or more successive  
16      read requestors.

1 15. The information handling system as described in claim  
2 12 further comprising:

3       means for releasing a resource lock; and  
4       means granting a requesting process ownership of the  
5           resource lock, wherein the requesting process is  
6           the first process to request the resource lock  
7           after the releasing.

1 16. The information handling system as described in claim  
2 15 wherein the requesting process does not correspond  
3 with any of the process identifiers included in the  
4 queue.

1 17. The information handling system as described in claim  
2 15 wherein the requesting process corresponds with one  
3 of the process identifiers included in the queue.

1 18. The information handling system as described in claim  
2 12 further comprising:  
3       means for speeding up processing for one or more of  
4           the read requestors that acquire a resource lock.

1 19. The information handling system as described in claim  
2 18 wherein the means for speeding up includes means  
3 for granting one or more read requestors a temporary  
4 time slice exemption.

1 20. The information handling system as described in claim  
2 12 further comprising:  
3       means for identifying an upgrader in the queue; and  
4       means for granting the upgrader a write lock to the  
5           shared resource.

1 21. The information handling system as described in claim  
2 20 further comprising:

3 means for boosting a priority of the upgrader prior to  
4 the upgrader writing to the shared resource.

1 22. A computer program product for managing a shared  
2 resource, said computer program product comprising:  
3 means for determining whether a process identifier  
4 included in a queue corresponds to a read  
5 requestor or a write requestor;

6 means for allowing the write requestor to write to the  
7 shared resource in response to the process  
8 identifier corresponding to the write requestor;  
9 and

10 means for allowing one or more successive read  
11 requestors to read from the shared resource in  
12 response to the process identifier corresponding  
13 to one of the read requestors.

1 23. The computer program product as described in claim 22  
2 further comprising:

3 means for setting a resource lock in an available  
4 mode;

5 means for setting the resource lock in a read mode in  
6 response to the first of the one or more read  
7 requestors accessing the available resource lock;  
8 and

9 means for granting each of the read requestors read  
10 access to the resource lock.

1 24. The computer program product as described in claim 22  
2 further comprising:

3 means for setting a write wanted flag in response to a  
4 write requestor requesting a resource lock after  
5 the resource lock has been set in read mode;

6 means for requesting lock access by one or more read  
7 requestors, the requesting occurring after the  
8 write wanted flag is set;  
9 means for granting lock access to a first group of the  
10 read requestors in response to the first group  
11 being included in the one or more successive read  
12 requestors; and  
13 means for denying lock access to a second group of the  
14 read requestors in response to the second group  
15 not being included in the one or more successive  
16 read requestors.

1 25. The computer program product as described in claim 24  
2 further comprising:

3 means for setting a woken up flag for each read  
4 requestor included in the first group.

1 26. The computer program product as described in claim 22  
2 further comprising:

3 means for releasing a resource lock; and  
4 means for granting a requesting process ownership of  
5 the resource lock, wherein the requesting process  
6 is the first process to request the resource lock  
7 after the releasing.

1 27. The computer program product as described in claim 26  
2 wherein the requesting process does not correspond  
3 with any of the process identifiers included in the  
4 queue.

1 28. The computer program product as described in claim 26  
2 wherein the requesting process corresponds with one of  
3 the process identifiers included in the queue.

1 29. The computer program product as described in claim 26  
2 further comprising:

3 means for speeding up processing for one or more read  
4 requestors that acquire the resource lock.

1 30. The computer program product as described in claim 29  
2 wherein the means for speeding up includes means for  
3 granting one or more read requestors a temporary time  
4 slice exemption.

1 31. The computer program product as described in claim 22  
2 further comprising:

3 means for identifying an upgrader in the queue; and  
4 means for granting the upgrader a write lock to the  
5 shared resource.

1 32. The computer program product as described in claim 31  
2 further comprising:

3 means for boosting a priority of the upgrader prior to  
4 the upgrader writing to the shared resource.